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The Impact of *Sukuk* on Corporate Financing: Malaysia Evidence

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Abstract

A remarkable effect of bond market development on corporate financing is detected among firms in Malaysia en route the study to identify the existence of target capital structure and simultaneously explore firm specific and country specific determinants of target capital structure for firms in Malaysia. This is argued to be the effect of the phenomenal development of *sukuk,* or *Shariah*-compliant bonds in Malaysia. The distinctive effect of bond market development with *sukuk* element on Malaysian firms shows the substantial influence of country specific factors like bond market development as well as governance incorporate financing decision. Employing the dynamic Partial Adjustment Model estimated based on the Generalized Method of Moments (GMM) estimator using data of non-financial listed firms for the period of 2000-2009, this study contributes to the existing literature by highlighting the impact ofa well-developed *sukuk* in bond market development on corporate financing decision and how good governance can ensure liquid and vibrant bond market as an alternative financial intermediary. This study concludes that several factors significantly influence target capital structure and the element of *sukuk* in bond market in Malaysia coupled with good governance have a substantial impact on corporate financing decision among firms in Malaysia

Keywords: Bond Market Development;*Sukuk*; Partial Adjustment Model.

1. Introduction

The literature has been documenting vast empirical evidences that firms do pursue target capital structure. Theories have been tasted, argued and referred to closely in the attempt to understand the financing behaviour of these firms. Each theory presents a different explanation of corporate financing under certain conditions, assumptions, and propositions (Eldomiaty, 2007). Since Modigliani and Miller (1958) pioneered the development of capital structure theories a theoretical framework has been developed with contributions mainly aiming at explaining the corporate financing decisions of firms throughout the world with different market environments. Fundamentally, three governing theories have been repeatedly examined and referred to in the capital structure literature throughout the years which are the trade-off theory which states that optimal capital structure can be achieved if the net tax advantage of debt financing balances the leverage related costs (Myers, 1984), the pecking order theory which emphasizes on the hierarchical choices of financing (Myers and Majluf, 1984) and the agency theory derived from information asymmetries (Jensen and Meckling, 1976).

2. Studies of capital structure

The understanding on the financing behaviour of firms and the landscape of studies done on capital structure has evolved in such a way that various determinants have been incorporated throughout the decades. Extensive work and studies on the impact of firm specifics and country specific factors affecting corporate financing decisions have indeed advanced our understanding on a firm's financing behaviour in a great deal. Studies such as by Booth et al. (2001); Deesomsak et al. (2004); De Jong et al. (2008) and

Kayo and Kimura (2011) incorporate country specific factors to examine the impact of country specific factors on firm leverage. They incorporate country specific factors such as the economic growth, stock market development, bond market development and levels of investor's protection. Their finding reveals that country specific factors do have significant influence on a firm's financing, not only by firm specific factors. Booth et al. (2001) find that, even though the corporate financing in developing countries is affected by the same determinants as in developed countries, differences spread across countries, indicating that country specific factors exist. De Jong et al. (2008) stress that country specific determinants should not be neglected in the capital structure studies since they have a sizeable explanatory power.

Due to the significance of country specific factors in influencing firm capital structure as evidenced in empirical studies, there is a need to incorporate the country specific factors to further understand the corporate financing in Malaysia. Following past literature, this study therefore incorporates country specific factors such as the stock market development, bond market development, economic growth, interest rates and country governance in addition to the firm specific factors in trying to understand the corporate financing behaviour of Malaysian firms. This study particularly picks at the significant impact of bond market development on capital structure of firms in Malaysia. Since the magnitude of significance is exceptionally evident for this particular variable, this study therefore intends to look into depth the rationale and justification of such reading. Throughout the analysis, we do not give equal attention to other determinants as the results are more or less similar to those recorded in past studies like Booth et al. (2001); Deesomsak et al. (2004); De Jong et al. (2008); Driffield and Pal (2008) and Kayo and Kimura et al. (2011) and it would only be a repetitive report to the literature. We will instead focus our discussion on the impact of bond market development in capital structure of Malaysian firms. Throughout our literature reading, it is noticeable that studies done on the impact of bond market development to capital structure are still very limited in numbers. Most past studies done on bond market are mainly focussing on the technicalities of it in terms of the infrastructure needed to develop this market into a more vibrant and liquid market to supplement the bank centric environment that has proven to be having destructive flaws especially during the 1997-1998 financial turmoil. Only very recently that bond market development be included in the study of capital structure as one of the variable representing country specific factors. Therefore this study intends to fill the gap by analysing the impact of bond market development on corporate financing, acknowledging its ability to offer alternative financing intermediary in financing long term investment projects.

The rest of the study is organised as follows: the next section explains bond market development and capital structure studies. Then in section three we will discuss the data and methodology employed in this study follows by empirical results in section four and concluding remarks in section five.

2.1. Capital structure and bond market development

Bond market development has been, very recently, included as one of the viable determinants in the country specific factors influencing corporate financing. Before, according to Sharma (2000) studies tended to focus on the technicalities of bond market development especially in Southeast Asia after the financial crisis. In 2000, Bolton and Freixas proposes a model of financial markets and corporate finance, with asymmetric information and no taxes, where equity issues, bank debt, and bond financing coexist in equilibrium. They found that firms turn to banks as a source of investment mainly because banks are good at helping them through times of financial distress. This financial flexibility is costly since banks themselves face costs of capital. To avoid this intermediation cost, firms may turn to bond or equity financing, but bonds imply an inefficient liquidation cost and equity an informational dilution cost. They reveal in their study which is broadly consistent with stylized facts that in equilibrium the riskier firms prefer bank loans, the safer ones tap the bond markets and the ones in between prefer to issue both equity and bond. Empirical studies done on the impact of bond market development on leverage are like Faulkender and Petersen (2006); De Jong et al. (2008) and Kayo and Kimura (2011). Faulkender and Petersen (2006) report in their study that firms with greater access to bond market have significantly more leverage. De Jong et al. (2008) also found a positive relationship between bond market development and firm leverage. They conclude that a country with a highly developed debt market will have a higher

private sector debt ratio. A vibrant and active bond market in a given country tends to increase firm leverage. In contrast, Kayo and Kimura (2011) found that bond market development is negatively related to leverage for firms in developing countries.

3. Data and methodology

This study employs panel data. Firms from the financial sector such as banks, insurance and finance companies are excluded from the samples firms. This is mainly because of the different accounting categories and rules practiced by these firms. This practice is in line with among others Rajan and Zingales (1995); DeMiguel and Pindado (2001) and De Jong et al. (2008). Therefore, after excluding these financial firms, the final sample consists of 790 firms. This study uses a 10 year period data from 2000 until 2009 where firm level data is sourced from Datastream database. For observation purposes, only firms with minimum of three consecutive observations towards the end of period understudy are included in the data set (Deesomsak et al. 2009). This means that the firms should at least be listed on the stock exchange from the year 2007. Table 1 presents in detail the structure of the panel data on sample firms for this study.

Table 1. The structure of the panel data

No. of Annual Observations for Each Firm	No. of Records on Each Firm	No. of Observations
3	34	102
4	14	56
5	30	150
6	48	288
7	63	441
8	40	320
9	92	828
10	469	4690
Total	790	6875

Note: Three annual observations refer to minimum listing period of 2007-2009.
Source: Datastream

We remove the outliers of top 2.5% and bottom 2.5% from dataset leaving final observations to 6531. Multicollinearity test in dataset is performed by first performing the correlation between variables and then checked based on the variance-inflating factor (VIF) as suggested by Gujarati and Porter (2009:340) (refer Appendix A for details of correlation matrix). There is no multicollinearity problem in the data since VIF of variables is less than 10.

3.1. Measures of leverage

Four measures of leverage are used in this study. Following Titman and Wessels (1988), leverage is defined as; the ratio of total debt and long term debt to total asset at book value (termed as book value leverage) and to total debt plus total equity at market value (termed as market value leverage). However, since the market value of debt is not available, quasi-market leverage will be used, where the book value of equity will be replaced by the market value of equity but debt, in this case, will be valued at its book value. The measures of leverage at book value and market value are also used to check the robustness of the results obtained in this study. To summarize the leverage definitions, at book value are Lev1= Total Debt over Total Asset and Lev2=Long Term Debt over Total Asset while market value, Lev3= Total Debt over Total Debt plus Total Equity and Lev4=Long Term Debt over Total Debt plus Total Equity.

3.2. Determinants of leverage

We have incorporated thirteen explanatory variables, divided according to firm and country specific to determine the relationship with leverage. Table 2 summarizes the explanatory variables and proxies used in the study.

Table 2. Explanatory variables and proxies

No.	Explanatory Variable	Proxy
	Firm Specific	
1	Non-Debt Tax Shield	Annual Depreciation Expenses over Total Assets
2	Tangibility	Net Fixed Asset over Total Asset
3	Profitability	EBIT over Total Assets
4	Business Risk	Yearly Change on Firm EBIT
5	Firm Size	Natural Logarithm of Total Asset
6	Growth Opportunities	Market Value of Equity to Book Value of Equity
7	Liquidity	Current Assets over Current Liabilities
8	Share Price Performance	First Difference of the Year End Share Price
	Country Specific	
9	Stock Market Development	Stock Market Capitalization over GDP
10	Bond Market Development	Total Bond Market Capitalization over GDP
11	Economic Growth	Annual Percentage Changes in GDP
12	Interest Rates	Lending Rate
13	Country Governance	Aggregate Governance Indicators, comprising of six indicators (voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law and control of corruption)

3.3. Methodology

This study specifies a dynamic panel data model to identify the existence of target capital structure and explores firm specific and country specific determinants of target capital structure for firms in Malaysia. Using the framework of Partial Adjustment Model (DeMiguel and Pindado, 2001; Drobetz and Wanzenried, 2006), this study assumes that the optimal leverage ratio for a firm is a function of sets of explanatory variables as in Equation (3.1).

$$Y_{it}^{*} = F(X_{it},X_i,X_t) \quad (3.1)$$

Where Y_{it}^{*} is the optimal leverage ratio of firm*i*, at time *t*, $X_{it}$is a vector of firm and time variant determinants of the optimal leverage, X_i andX_t are unobservable firm specific and country specific, and time specific effect which is common to all firms and can change through time. In a perfectly frictionless world with no adjustment cost, the firm would immediately respond with complete adjustment to variations in the independent variables by varying its existing leverage ratio to equalize its optimal leverage. Thus, at any point in time, the observed leverage of firm*i* at time $t(Y_{it})$ should equal the optimal leverage, that is, $Y_{it}= Y_{it}^{*}$. This implies that the change in actual leverage from the previous to the current period should be exactly equal to the change required for the firm to be at optimal at time *t*, that is, $Y_{it}- Y_{it-1} = Y_{it}^{*} - Y_{it-1}$. In practice, however, the existence of significant adjustment costs permits only partial adjustment to take place. This can be represented by a partial adjustment model as in Equation (3.2).

$$Y_{it}- Y_{it-1} = \delta_{it} (Y_{it}^{*} - Y_{it-1}) \quad (3.2)$$

Where δ_{it}, is known as the speed of adjustment, it represents the rate of convergence of Y_{it}, to its optimal value. The effects of adjustment costs are represented by the restriction that $|\delta_{it}|<1$, which is a

condition that $Y_{it} \rightarrow Y_{it}^{*}$ as $t \rightarrow \infty$. Leverage values that are not at their optimal level will be referred to as sub-optimal. Since δ_{it} represents the speed of adjustment, equation (3.2) explains the adjustment speed depending on its adjustment parameter value. The model assumes that the firm's long term target is a linear function of all the explanatory variables identified earlier. The firm's behaviour can be represented by Equation (3.3) below.

$$Y_{it}^{*} = \sum_{n=1}^{N} \beta_k X_{kit} + \varepsilon_{it} \quad (3.3)$$

Combining Equation (3.2) and (3.3), we derived,

$$Y_{it} = Y_{it-1} + \delta_{it}(Y_{it}^{*} - Y_{it-1}) \quad (3.4)$$

$$Y_{it} = Y_{it-1} + \delta_{it} Y_{it}^{*} - \delta_{it} Y_{it-1} \quad (3.5)$$

$$Y_{it} = (1 - \delta_{it}) Y_{it-1} + \delta_{it} (\sum_{n=1}^{N} \beta_k X_{kit} + \varepsilon_{it}) \quad (3.6)$$

$$Y_{it}^{*} = (1 - \delta_{it}) Y_{it-1} + \sum_{n=1}^{N} \delta_{it} \beta_k X_{kit} + \delta_{it} \varepsilon_{it} \quad (3.7)$$

To simplify, Equation (3.7) can also be written as,

$$Y_{it}^{*} = \lambda_0 Y_{it-1} + \sum_{n=1}^{N} \lambda_k X_{kit} + \mu_{it} \quad (3.8)$$

where $\lambda_0 = 1 - \delta_{it}, \lambda_k = \delta_{it}\beta_k$, and $\delta_{it}\varepsilon_{it} = \mu_{it}$ (where μ_{it} has the same properties as ε_{it}).

Equation (3.8) above is the dynamic capital structure model of which this study is intended to estimate using the Generalized Method of Moments (GMM) estimation technique, suggested by Arellano and Bond (1991). GMM estimator is designed for situations with "small *T*, large *N*" panel data, meaning few time periods and many individual firms (Roodman, 2006). This situation is very much applicable to this study. To ensure efficiency of this estimator, three diagnostic tests were performed and these include Wald test of jointsignificance of the estimated coefficients, the absence of autocorrelations of the residuals (AR2) and the validity of the instrumental variables used (*J*-statistic).The results of the GMM estimations are presented in Table 3.

Table 3. GMM-First Difference

N=6531	Book Value		Market Value	
Independent Variable	Lev1	Lev2	Lev3	Lev4
Lev(-1)	0.4612***	0.6534***	0.4300***	0.5746***
	[7.1235]	[5.5707]	[7.8788]	[7.4328]
NDTS	-0.3297	-0.4923***	-0.7179	-0.5387***
	[-1.1790]	[-2.7282]	[-0.6322]	[-2.4543]
Tangibility	0.1680***	0.0688*	0.1150	0.1507***
	[4.8934]	[1.8941]	[1.5529]	[4.2689]
Profitability	-0.0793***	-0.0834***	-0.4232***	-0.0016
	[-2.7688]	[-3.5405]	[-11.01]	[-0.0961]

Business Risk	-0.0001	0.0001	-0.0004	0.0001
	[-0.4043]	[0.9090]	[-1.0980]	[0.8364]
Firm Size	0.1297***	0.0305**	-0.1727	0.0712***
	[5.7611]	[2.8189]	[-1.0964]	[4.0846]
Growth	-0.0038**	0.0032*	-0.0017	-0.0010
	[-2.3030]	[1.7537]	[-0.8452]	[-0.5018]
Liquidity	-0.0010***	0.0004	-0.0015	0.0006
	[-3.8293]	[0.8534]	[-1.3430]	[1.0197]
Share Price	-0.0264***	0.0024	-0.0196**	-0.0057**
	[-4.2949]	[0.8944]	[-2.1222]	[-2.0051]
Stock Market	-0.0005	-0.0016	-0.0062*	-0.0017
	[-0.3967]	[-1.5087]	[-1.8973]	[-1.2038]
Bond Market	-0.4220	1.8765	7.5830*	1.5563
	[-0.2576]	[1.4576]	[1.9091]	[0.9296]
Economic	-0.0172	0.0665	0.2638**	0.0539
	[-0.3147]	[1.5665]	[1.9811]	[0.9621]
Interest Rates	-0.0039	0.0664	0.3025*	0.0505
	[-0.0561]	[1.2211]	[1.8147]	[0.7144]
Governance	-0.0292	0.9697	3.7165*	0.8554
	[-0.0345]	[1.4615]	[1.8476]	[0.9815]
1st Order Cor.	-0.2427***	-0.1950***	-0.3887***	-0.3718***
2nd Order Cor.	0.1039***	0.3901***	0.0207	-0.0470***
Wald (joint)χ2	647.2911***	569.4434***	63.3091***	248.0277***
J-Statistic	151.3819***	130.3220***	24.5782	131.0562***

$$Lev_{i,t} = Lev(-1)_{i,t} + \beta_1 NDTS_{i,t} + \beta_2 TANG_{i,t} + \beta_3 PROFIT_{i,t} + \beta_4 RISK_{i,t} + \beta_5 SIZE_{i,t} + \beta_6 GROWTH_{i,t} + \beta_7 LIQUIDITY_{i,t} + \beta_8 SPP_{i,t} + \beta_9 STOCKMKT_t + \beta_{10} BONDMKT_t + \beta_{11} ECON_t + \beta_{12} INT_t + \beta_{13} GOVERN_t + \varepsilon_{it.}$$

Notes: ***, **, * denotes significant at 1%, 5%, 10% level respectively. The *t*-statistics in parentheses are the *t*-values adjusted for White's heteroscedasticity consistent standard errors. The Wald test statistic refers to the null hypothesis that all coefficients on the determinants of the target debt ratio are jointly equal zero. Second order correlation refers to the null of no second order correlation in the residuals. The *J* test statistic for the null that the over identifying restrictions are valid.
Firm Specific: NDTS, Tangibility, Profitability, Business Risk, Firm Size, Economic Growth, Liquidity, Share Price Performance.Country Specific: Stock Market Development, Bond Market Development, Economic Growth, Interest Rate, Governance.

4. Empirical result

Table 3 records the results according to the various leverage definitions as reported by the GMM estimators. This study adopts three standard diagnostic tests designed to detect problems on GMM (Wald test, AR2 and *J*-statistic). After going through the results of each diagnostic test, we found only leverage definition Lev3 (total debt at market value) satisfied the diagnostic tests. Lev3 therefore is to be employed in explaining the dynamic capital structure of Malaysian firms.

4.1. Target leverage

The estimated coefficient of the lagged leverage is significant (p=0.01) for Malaysian firms. First, it indicates the existence of target capital structure and firms do gradually adjust to be at the target. If a firm's actual leverage deviates from the target, it will undertake some adjustment process to attain to the target leverage. However, capital market imperfections may prevent an instantaneous adjustment of the actual leverage to the desired level. In the presence of adjustment costs, it might be cheaper for firms not to fully adjust to their targets even if they recognize that their existing leverage ratios are not optimal

(Heshmati, 2001). Malaysian firms are found to be under-adjust, being below the required adjustment to be at the target within a year.

Second, based on the magnitude of the coefficients of the lev-1, the lower the coefficient implies the higher the speed of adjustment towards the target leverage (Ozkan, 2001; Gaud et al. 2005). Flannery and Rangan (2006) point out that the speed of adjustment towards the target capital structure depends on the adjustment costs as well as the costs of deviating from the target. Adjustment costs are on the other hand, dependent on transaction cost. Clark et al. (2009) find remarkable evidence that adjustment costs are preventing firms from moving towards their target capital structures.

4.2. Bond market development

A significant positive relationship between bond market development and leverage on Malaysian firms (p=0.10) is reported in this study. The finding explains the importance of local bond market for firms in raising bond issues, as alternative to traditional bank financing, thus increasing firm leverage. De Jong et al. (2008) argue that as a country's bond market is further developed, firms have more choice for borrowing and are willing to take in more debt. They also conclude that a higher bond market development mitigates better protection of creditors and better legal enforcement, thus encourages lenders to increase lending to firms. In view of this, to attract local as well as foreign investors Malaysia has established an attractive irresistible facilitative regulatory environment, including Foreign Exchange Administration rules that include no withholding tax, no capital gains tax, and no restrictions on investing in Malaysian ringgit bonds. In addition, a wide range of foreign exchange and interest rate hedging instruments have been introduced, contributing to the deepening and growing sophistication of the Malaysian bond market (Felmanet al. 2011).

The significantly distinctive result on the impact of bond market development on firms leverage in Malaysia is argued to be attributed to the issuance of *sukuk* (Ahmad and Radzi, 2011).*Sukuk* or often referred to as Islamic bondsare Islamic investment certificates similar to conventional allowing sovereign and corporate entities to raise funds in capital markets but following the principles of *Shariah*, which is the Islamic legal code (Godlewskiet al. 2010). The corporate bond market, with the issuance of *sukuk* acts as a "spare tyre" that corporates can use when other parts of the financial system come under stress. This policy initiative to promote the issuance of *sukuk* has boosted Malaysia's bond market (Felmanet al. 2011) as demonstrated by the result reported in this study. Unlike conventional bonds with fixed coupon payments, s*ukuk* are structured as participation certificates that provide investors with a share of asset returns making them compatible with the Islamic prohibition of interest payments. As a result, it has gained support domestically and also global investors from other Islamic nations. Felman reported that *sukuk* as a ratio to GDP has doubled since 2001, exceeding 28 per cent of Malaysian GDP by 2008. This expansion, according to his report, has given Malaysia a dominant position in the global market, with a 64% share of *sukuk* outstanding as of end 2010 (SC, 2010).

The significant positive results on bond market development as depicted in this study is supported by the report done by Ernst and Young Islamic Funds and Investments Report (2009) that in 2007, the volume of issued *sukuk* in Malaysia was USD28.1 billion compared with USD19 billion in Gulf Cooperation Council (GCC) countries. This feature, as narrated in the report, is particularly true for corporate *sukuk*, as 75% of total *sukuk* were issued in Malaysia over the period January 2004-June 2007. Jobst et al. (2008) further strengthened the result of this study by reporting that *sukuk*represents about half of the total stock of Malaysian corporate bonds, implying that s*ukuk* are not limited to a small portion of the dis-intermediated financing for companies.

The Malaysian *sukuk* market has recorded an average annual growth rate of 21% between 2001 and 2008. In Malaysia the *sukuk* market now plays an important role in financing the economy accounting for more than half of the country's total debt, both in terms of balance outstanding and issuance (Ahmad and Radzi, 2011). As reported by SC (2010), from January to September 2010, over 55% of all bonds approved by the SC were *sukuk*. This fact further illustrates the significant effect of bond market development on firms leverage recorded in this study. Internationally, an exceptional growth in the global *sukuk* market has been reported in which the issuance of *sukuk* increased rapidly from USD1 billion a year in 2002 to USD34 billion in 2007 (IFSL, 2010). With 68.9% of the global outstanding *sukuk* originating in

Malaysia makes Malaysia the largest Islamic securities or *sukuk* market in the world (Noor and Mohideen, 2009). Although during the financial crisis, *sukuk* was then not well insulated against financial stress and was badly hit by it, globally, the year 2009 witnessed Malaysian *sukuk* market well on the road to recovery (Abdullah et al. 2009). The 65 *sukuk* (SC, 2009) issues coming out of Malaysia represented approximately 54% of the number of worldwide issues amounted to approximately 48% of *sukuk* issued in Malaysian ringgit (Damak et al. 2010). Malaysia has become the frontrunner in the development of Islamic capital markets since the 1980s (Jobst et al. 2008), and continued to retain its title as the number one destination for issuing *sukuk*, maintaining a 71.6% market share in 2011 (SC Report, 2011) .

In term of size of bond market, Malaysia is considered to have a sizeable bond market compared to its neighbouring countries such as Thailand and Singapore. Felmanet al. (2011) in his studies on corporate bond market development in Southeast Asia states that, for the period of 2000-2009, as a comparison, Thailand private bond market constitutes an average of 13.86% of GDP while Singapore 19.12%, comparatively smaller percentage in contrast to Malaysia, 52.54% of GDP. This is further evidenced based on data from the World Bank (2000-2009) that shows in term of the size total bond market (public plus corporate bond) over GDP for Malaysia constitutes on average of 88% compared to only 41% and 55% for Thailand and Singapore respectively.

Reflected by the significant bond market developments in Malaysia, the government policies are responsible for the success of bond market development in Malaysia, with the element of *sukuk* playing significant role. In 2000, the government laid out a ten-year Capital Market Master Plan for developing the bond market, both *sukuk* and conventional. Subsequently, Cagamas Berhad, the National Mortgage Corporation, in 2004 issued the world's first rated Islamic Residential Mortgage-Backed *Sukuk Musyarakah*, of RM2.05 billion. The registration of Islamic banks was eased, and capital controls were relaxed for multi-currency transactions as a part of Islamic banking activities. Tax exemptions have been granted for banks until 2016 on income earned from international banking and *takaful*(Islamic insurance) operations in foreign currencies. The government has also provided assistance in placing *sukuk* via the Malaysia International Islamic Financial Centre (MIFC). In 2010 KhazanahNasional has successfully raised RM3.6 billion by issuing *sukuk* in Singapore. Being an investment arm of the government, the participation of KhazanahNasional has helped in the expansion of Islamic finance as the issuance of *sukuk* are effectively guaranteed by the Malaysian Government (Lai, 2012).

The private sector (including state-owned enterprises) has responded to theseincentives with enthusiasm. *Sukuk* now account for more than half the private debt securities outstanding, double their share of a decade ago. Since bond market development is very much related to the governance issues in terms of efforts and responsibilities of the government in ensuring a vibrant and active environment, it is interesting to note that the results on country governance variable for this study recorded a significant positive relationship with leverage (p=0.10).

As mentioned earlier, study on the impact of bond market development on capital structure is still very limited and relatively new in the literature being one of the variables in country specific factors. The element of *sukuk* that exists in the development of bond market in Malaysia has resulted in the remarkable magnitude of its influence in the capital structure. This is indeed an interesting new contribution to the existing literature where bond market development with the element of *sukuk* showing very significant impact on the corporate financing of Malaysian firms. Without putting aside the influence of good governance in the development of bond market, this study finds that the triangular relationship between bond market development, governance and capital structure do complement each other as depicted in the results recorded in this study. Abraham and Sayyed (2012) in their work on GCC debt market focussing on Saudi Arabia realise that a sound and reliable legal framework is crucial in ensuring a vibrant and liquid bond market and *sukuk* issuance. Malaysia is seen to have taken charge in developing legal and regulatory standards thus facilitates a rapid growth in *sukuk* issuance and they suggest the GCC policy makers to adapt such legal and regulatory framework to their local environment.

As has been mentioned earlier in the paper, we do not intend to illustrate in detail the relationship of other determinants incorporated in this study. Nevertheless, other variables such as profitability, share price performance, stock market development, economic growth and interest rates have shown significant influence on corporate financing.

5. Conclusion

This study employs dynamic framework and generally firms do pursue target in their capital structure and certain determinants, firm specifics and also country specifics do influence the capital structure decisions of firms in the region. A distinguished effect of bond market development in Malaysia is picked in this study which explains the variations of the capital structure of firms in the country. This encouraging *sukuk* issuance scenario is owed to the policy initiatives from the Malaysian government in meeting the dire needs to provide an alternative financing intermediation vehicle apart from relying heavily on domestic bank loans and also foreign loans in Malaysia. Malaysian *sukuk* market has shown amazing progress since its introduction in 1990 and Malaysia has successfully created a niche market in this area. It is estimated that 72% (2011) of the total global Islamic bonds that have been issued were issued in Malaysia, making Malaysia one of the world's largest most dynamic *sukuk* markets.

The distinctive effect of bond market development with *sukuk* element on Malaysian firms' capital structure is a validation of a fact that the corporate financing decision is not only the product of the firm's own characteristics but also the result of institutional environment and governance in which the firm operates (Kayo and Kimura, 2011). This study contributes to the existing literature by linking Islamic finance and corporate finance and highlighting the impact of *sukuk* in bond market development as one of the significant determinants of target capital structure via the dynamic model.

References

Abdullah, M.E., Burhan, S. and Shah, M.A.R. (2009) The Bright Side of a Downturn, Rating Agency Malaysia, Kuala Lumpur.

Abraham, A. and Sayyed, F.J. (2012) Deepening the GCC Debt Markets: the Saudi Arabian Experience, *The GCC Economies*, Part 1, 11-20.

Ahmad, W. and Radzi, R.M. (2011) Sustainability of *Sukuk* and Conventional Bond during Financial Crisis: Malaysia's Capital Market,*Global Economy and Finance Journal*, 4(2), 33-45.

Arellano, M. and Bond, S.R. (1991) Some Tests of Specification for Panel Data: Monte Carlo Evidence and Application to Employment Equations, *Review of Economic Studies*, 58(2), 277-297.

Bolton, P. and Freixas, X. (2000) Equity, Bonds, and Bank Debt: Capital Structure and Financial Market Equilibrium under Asymmetric Information,*Journal of Political Economy*, 108(2), 324-351.

Booth, L., Aivazian. V., Demirguc-Kunt, A. and Maksimovic, V. (2001) Capital Structure In Developing Countries, *Journal of Finance*, 56(1), 87-130.

Clark, B., Francis B. and Hasan, I. (2009) Do firms adjust toward target capital structure. Some international evidence, available at: http://ssrn.com/abstract=1364095 (accessed 8 May 2011).

Damak, M., Esters, C. and Maheshwari, R. (2010) The *Sukuk* Market is Likely to Show Steady Growth in 2010, in *Islamic Finance Outlook 2010*, Standard and Poor's New York (2010), 13-18.

De Jong, A., Kabir, R. and Nguyen, T.T. (2008) Capital Structure around the World: the Roles of Firm and Country-Specific Determinants, *Journal of Banking and Finance*, 32, 1954-1969.

Deesomsak, R., Paudyal, K. and Pescetto, G. (2004) The Determinants of Capital Structure: Evidence from the Asia Pacific Region, *Journal of Multinational Financial Management*, 14, 387–405.

_____Debt Maturity Structure and the 1997 Asian Financial Crisis, *Journal of Multinational Financial Management*, 19, 26–42.

De Miguel, A.D. and Pindado, J. (2001) Determinant of Capital Structure: Evidence from Spanish Panel Data, *Journal of Corporate Finance*, 7, 77-99.

Driffield, N. and Pal, S. (2010) Evolution of Capital Structure in East Asia: Corporate Inertia or Endeavours, *Journal of Royal Statistical Society A*,173 (1), 1-29.

Drobetz, W. and Wanzenried, G. (2006) What Determines the Speed of Adjustment to the Target Capital Structure? *Applied Financial Economics*, 16, 941-958.

Eldomiaty, T.I. (2007) Determinants of Corporate Capital Structure: Evidence from an Emerging Economy, *International Journal Of Commerce and Management*,17(1), 25-43.

Ernst and Young (2009) Islamic Funds and Investment Report: Surviving and Adapting in a Downturn, available at: http://www.assaif.org/content/download/4885/44574/file/ (accessed 19 April 2011).

Faulkender, M. and Petersen, M.A. (2006) Does the Source of Capital Affect Capital Structure? *The Review of Financial Studies*, 19(1), 45-79.

Felman, J., Gray, S., Goswami, M., Jobst, A., Pradhan, M., Peiris, S. and Sereviratne, D. (2011) ASEAN5 Bond Market Development. Where Does It Stand? Where Is It Going, International Monetary Fund Working Paper, No. 137.

Flannery, M. and Rangan, K. (2006) Partial Adjustment towards Target Capital Structures, *Journal of Financial Economics*, 79, 469-506.

Gaud, P., Jani, E., Hoesli M. and Bender A. (2005), The Capital Structure of Swiss Companies: An Empirical Analysis Using Dynamic Panel Data, *European Financial Management*, 11(1), 1-28.

Godlewski, C.J., Turk-Ariss, R. and Weill, L. (2010) Are *Sukuk*Really Special? Evidence from the Malaysian Stock Exchange, available at: http://www.iefpedia.com/english/wp-content/uploads/2010/03/Are-*Sukuk*-Really-Special-Evidence-from-the-Malaysian-Stock-Exchange.pdf (accessed 15 June 2011).

Gujarati, D.N. and Porter, D.C. (2001) *Basic Econometrics*. McGraw-Hill : New York.

Heshmati, A. (2001) The Dynamics of Capital Structure: Evidence from Swedish Micro and Small Firm, *Research in Banking and Finance*, 2, 199-241.

International Financial Services London (2010) Islamic Finance 2010, available at: www.ifsl.org.uk(accessed 20 October 2011).

Jensen, M.C. and Meckling, W. (1976) Theory of the Firm: Managerial Behaviour, Agency Costs and Ownership Structure, *Journal of Financial Economics*, 3, 305–360.

Jobst, A., Kunzel, P., Mills, P. and Sy, A. (2008) Islamic Bond Issuance- What Sovereign Debt Managers Need to Know, International Monetary Fund Working Paper, No. 3.

Kayo, E.K. and Kimura, H. (2011) Hierarchical Determinants of Capital Structure, *Journal of Banking and Finance*, 35, 358–371.

Lai, J. (2012). KhazanahNasional: Malaysia's Treasure Trove, *Journal of the Asia Pacific Economy*, 17(2), 236-252

Modigliani, F. and Miller, M. (1958) The Cost of Capital, Corporation Finance, and the Theory of Investment, *American Economic Review*, 48, 261-297.

Myers, S.C. (1984) The Capital Structure Puzzle, *Journal of Finance*, 39, 575-592.

Myers, S.C. and Majluf, N.S. (1984) Corporate Financing and Investment Decisions when Firms Have Information that Investors Do Not Have, *Journal of Financial Economics*, 13, 187-221.

Noor, L.M. and Mohideen, M.F.K. (2009) The Malaysian *Sukuk* Market, in Malaysian *Sukuk* Market Handbook, RAM Rating Services Berhad, Kuala Lumpur, 1-18.

Ozkan, A. (2001) Determinants of Capital Structure and Adjustment to Long Run Target: Evidence from UK Company Panel Data, *Journal of Business Finance and Accounting*, 28(1), 175–98.

Rajan, R.G. and Zingales, L. (1995) What Do We Know About Capital Structure? Some Evidence from International Data, *Journal of Finance*, 50, 1421-1460.

Roodman, D. (2006) An Introduction to 'Difference' and 'System' GMM in STATA, CGDEV Working Paper, No. 103,

Securities Commission of Malaysia Annual Reports, available at: http://www.sc.com.my/(accessed 9 April 2012).

Sharma, K. (2000) The Underlying Constraints on Corporate Bond Market Development in Southeast Asia. Economic and Social Affairs, DESA Discussion Paper, No. 14, available at: http://ssrn.com/paper=245968 (accessed 16 march 2009).

Titman, S. and Wessels, R. (1988) The Determinants of Capital Structure Choice, *Journal of Finance*, 43, 1-19.

World Bank Database, available at: http://data.worldbank.org/(accessed 5 May 2012).

Appendix A. Pearson correlation matrix (N=6531)

Variable	Lev1	Lev2	Lev3	Lev4	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	X13
Lev1	1.000																
Lev2	0.242**	1.000															
Lev3	0.550**	0.498**	1.000														
Lev4	0.300**	0.888**	0.629**	1.000													
X1	0.028*	0.029*	0.003	-0.010	1.000												
X2	0.040**	-0.003	0.035**	0.000	0.292**	1.000											
X3	-0.045**	-0.018	-0.110**	-0.034**	0.892**	0.273**	1.000										
X4	-0.004	-0.004	-0.008	-0.003	-0.010	-0.001	0.007	1.000									
X5	-0.045**	0.284**	0.180**	0.337**	-0.152**	-0.040**	-0.062**	0.005	1.000								
X6	-0.039**	0.025*	-0.168**	-0.090**	0.034**	-0.014	0.093**	-0.003	0.051**	1.000							
X7	-0.114**	-0.107**	-0.249**	-0.122**	0.060**	0.009	0.085**	0.002	-0.073**	0.010	1.000						
X8	-0.018	0.038**	-0.095**	-0.019	-0.045**	-0.003	0.035**	-0.155**	0.042**	0.067**	-0.003	1.000					
X9	0.008	0.010	-0.064**	-0.031*	-0.003	0.000	-0.004	0.014	-0.019	0.005	0.002	0.123**	1.000				
X10	-0.014	0.020	0.059**	0.055**	0.006	-0.007	-0.001	0.017	0.027*	-0.067**	0.006	-0.025	-0.170**	1.000			
X11	0.017	0.005	-0.050**	-0.028*	-0.013	-0.030*	-0.004	0.004	-0.026*	0.079**	-0.009	0.025*	0.135**	-0.663**	1.000		
X12	-0.004	-0.049**	-0.048**	-0.081**	0.018	0.029*	0.027**	0.006	-0.011	0.041**	-0.007	0.026	-0.069**	-0.502**	0.035**	1.000	
X13	0.018	0.016	-0.042**	-0.005	0.012	0.077**	-0.013	-0.012	-0.049**	-0.008	0.030*	0.007	0.538**	-0.389**	0.090**	-0.294**	1.000

Notes: ***,**,* denotes significant at 1%, 5% and 10% level respectively.
Leverage Definitions: Lev1 (Total Debt/Total Asset); Lev2 (Long Term Debt/Total Asset); Lev3 (Total Debt/Total Debt + Total Equity); Lev4 (Long Term Debt/Total Debt + Total Equity)
Firm Specific Variables: X1(NDTS), X2(Tangibility), X3(Profitability), X4(Business Risk), X5(Firm Size), X6(Growth), X7(Liquidity), X8(Share Price Performance)
Country Specific Variables: X9(Stock Market Development), X10(Bond Market Development), X11(Economic Growth), X12(Interest Rate), X13(Governance)
Proxy of Variables: NDTS (X1)=Annual Depreciation Expenses/TA; Tangibility(X2)=Net FA/TA; Profitability(X3)=EBIT/TA; Business Risk(X4)=Yearly Change on Firm EBIT; Firm Size (X5)=Natural Log of TA; Growth (X6)=Equity(MV)/Equity(BV); Liquidity(X7)=CA/CL; SPP=First Diff. Year End Share Price; Stock Market Development= Stock Market Capitalization/GDP; Bond Market Development= Total Bond Market Capitalization/GDP; Economic Growth= Annual % Changes in GDP; Interest Rates= Lending Rate; Governance= Aggregate Governance Indicators comprising of six indicators (Voice and Accountability, Political Stability and Absence of Violence, Government Effectiveness, Regulatory Quality, Rule of Law, Control of Corruption).